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TABLE OF CONTENTS.

HINE—The Genus <i>Myiolepta</i>	205
SCHAFFNER—The Classification of Plants, XI.....	211
BILSING—Preliminary List of the Spiders of Ohio	215
SCHAFFNER—The Sprouting of the Two Seeds of a Cocklebur.....	216
Summer in a Bog.....	217
MCAVOY—Meeting of the Biological Club.....	217
PHILPOTT—An Addition to the Odonata of Ohio.....	219
HINE—A Note on <i>Anax longipes</i> Hagen	219

THE GENUS MYIOLEPTA.

(Family Syrphidae.)

JAS. S. HINE.

The insects falling in this genus are modest colored, medium sized flies usually found about flowers of various kinds in spring or early summer. About a dozen valid species have been described; three or four from the old world, two from South America and seven from North America. *M. luteola* Gmelin, from Europe, is the type species.

The marginal cell of the wing is open, the anterior cross-vein is distinctly before the middle of the discal cell; antennæ short, but located on a distinct prominence, third segment rather large with a long bare dorsal arista inserted near its base; legs rather stout, all the femora enlarged, and serrate towards the tip but without any distinct tooth, tibiæ all curved. The eyes are holoptic or nearly so in the males and rather widely separated in the female, bare in both sexes. Face hollowed out beneath the antennæ with a prominent facial tubercle in the male followed by an equally prominent oral margin; in the female the concavity beneath the antennæ is a steady curve to the oral margin.

The genus was founded by Newman in 1838 in his Entomological Magazine, Vol. V, p. 373, as *Myiolepta* to receive *M. luteola* Gmelin. In 1844 Rondani proposed the name *Xylotaëja* and placed in it *Syrphus valgus* Panzer. These two species are now considered as belonging to the same genus and since the former, more correctly spelled *Myiolepta*, has priority it is used by modern students. It is of interest that Walker has referred to this genus as *Leptomysia* in *Insecta Britannica* Diptera Vol. I, p. 254. The species do not appear to be so common as many

other species of Syrphidæ. The usual collection does not contain very many specimens. The material for this paper was procured entirely from Dury's collection, from R. C. Osborn's collection and from my collection, the latter now largely with the Ohio State University collection. All the known North American species are represented, but none of them by more than a dozen specimens.

KEY TO THE NORTH AMERICAN SPECIES.

1. Whole body uniform shining black without yellow tomentum or ground color. 2.
Whole body not shining black often either with dense yellow tomentum or yellow ground color. 3.
2. Legs entirely black. *bella*.
Middle and hind legs have the first three tarsal segments of each white. *nigra*.
3. Whole body uniform brown with very short yellow tomentum. Each side of the face below with a luteous spot. *strigilata*.
Body not uniform brown, no luteous spots on the face. 4.
4. Thorax with yellow transverse markings. *transversa*.
Thorax without transverse markings. 5.
5. Ground color of the abdomen marked with yellow on the sides of first two or three segments. *varipes*.
Ground color of the abdomen not marked with yellow, body with more or less yellow tomentum. 6.
6. Male. Tomentum of the thoracic dorsum long, entirely hiding the ground color, abdomen with transverse pollinose markings. *aurinota*.
Male. Tomentum of the thoracic dorsum short and in rows, not concealing the ground color, abdomen without pollinose markings. *auricaudata*.

Myiolepta bella Williston. One of the largest species of its genus, whole body, including the legs, shining black, wings slightly fumose. Length 9 millimeters.

Female: Front and face shining black, not at all pollinose, face longer than in the other species of its genus, hollowed out so that nearly a uniform curve extends from the base of the antennæ to the oral margin. Antenna rather short, first two segments black third segment nearly round, reddish brown with the upper margin darker, arista dark in color and inserted near the base. Thorax with sparse hair which is partially light in color, but mostly black; hair of the legs largely pale, but some black intermixed in places; wings uniform pale fumose all over, veins nearly black, first posterior cell closed a little way from the margin, the petiole much less than half as long as the anterior cross-vein, second vein nearly straight at apex, thus forming a distinct acute angle with the costa and differing in this respect from the other North American species of its genus. Hair of the abdomen pale.

Williston reports three females from Washington and Mount Hood, Oregon; Coquillett studied a male collected by Kincaid at Virgin Bay, Alaska, and R. C. Osborn took a female specimen at Port Renfrew, British Columbia, June 30, 1901. I have used the latter in my study of the species.

Myiolepta nigra Loew. Rather large, black with the exception of the middle and posterior feet which are partially white, wing hyaline at base, unevenly infuscated on distal half; maximum length about 10 millimeters.

Male: Vertical triangle rather small, shining black, frontal triangle and face largely gray pollinose, a patch above the bases of the antennæ, one on middle of face, including the tubercle and extending forward to the oral margin, and the cheeks mostly shining black; antennæ with third segment rather small, brown, arista basal and of the same color as its segment. Thorax with white hair, legs shining black with the exception of the first three tarsal segments on each which are pale, sometimes the front feet are entirely black or the first three segments may be intermediate in color, wings hyaline at base, apical part infuscated, but paler along the posterior margin, first posterior cell closed, the petiole much less than half as long as the anterior cross-vein, second vein abruptly curved at the apex and meeting the costa at nearly a right angle. Abdomen shining black, sparsely clothed with short hair.

Female: Colored like the male, except that the front tarsi are uniform black in all the half dozen specimens studied. Eyes widely separated, front narrowed above; face not tuberculate, gradually concave from bases of antennæ to the oral margin.

Specimens from Medina County, Ohio and from Montreal, Canada. Former writers have reported the species from Pennsylvania, New York and North Carolina.

In Wiener Entomologische Zeitung, Volume I, 1882, pg. 250, Dr. E. Becher has described a species of *Myiolepta* as *M. obscura*. There are pretty strong reasons for believing that this is a synonym of *M. nigra* Lw. I have not been able to procure examples of *obscura* from Europe, so I have made no comparisons of specimens. Becher's type was procured in Austria.

Myiolepta strigilata Loew. Smaller, rather robust, uniform brown, wings pale yellowish, legs pale from the apexes of the femora. Length 5-7 millimeters.

Male: This sex differs from the same sex in other American species studied in having the eyes narrowly separated. Williston characterized this species by the luteous spot on either side of the face, adjacent to the cheek. In a male before me and in other males I have seen, this spot is very obscure, although present. The whole face and frontal triangle, except the cheeks and tubercle with a narrow extension to the oral margin, is rather densely

white pollinose, thus the spots in question are more or less concealed. Facial concavity beneath the antennæ not very pronounced, facial tubercle small, round and shining black. Antenna brown, third segment somewhat elongate, light brown with the arista of the same color. Thorax brown, with very short, sparse light colored tomentum. Wing nearly uniform pale yellowish, first posterior cell closed, petiole short; second vein abruptly curved at apex meeting the costa at nearly a right angle. All the legs colored alike, each femur dark brown to apex; apex of femur, whole tibia and first three or four tarsal segments pale, last one or two tarsal segments darker usually. Abdomen uniform shining brown with very short sparse, light colored tomentum.

Female: Like the male in color. Facial concavity beneath the antennæ not very pronounced; luteous spots adjacent to the cheeks more conspicuous than in the male.

Specimens from Cincinnati and Columbus, Ohio and from Southern Pines, North Carolina, (Manee). Previously reported from Texas and North Carolina.

Myiolepta transversa n. sp. Rather small, mostly black in ground color, anterior part of thorax with two transverse golden bands interrupted at the middle. Fourth abdominal segment and sides of the third with dense golden tomentum. Wings somewhat fumose. Length 7 millimeters.

Female: Eyes rather widely separated, front narrowed above, front and face with a rather thin layer of golden pollen, cheeks and middle of face shining black, antennæ brown, third segment oblong, longer than the other two segments combined, arista very near the base and of the same color of the segment that bears it. Thorax black, before with two narrow, golden transverse markings interrupted at the middle and a golden transverse spot before the scutellum, pleuræ with sparse white hair, femora dark brown or nearly black, tibiæ lighter, especially at bases, middle and hind tarsi pale brown, front tarsi nearly black, wings slightly fumose, first posterior cell closed, the petiole about as long as the anterior cross-vein, second vein abruptly curved at apex, meeting the costa at nearly a right angle. Abdomen black in ground color, fourth segment and sides of third with golden vestiture.

Type female taken at Puerto Cortez, Honduras, March 23, 1905.

This species is somewhat intermediate between the genera *Myiolepta* and *Syritta*. The concavity beneath the bases of the antennæ is very short, and extending from this concavity to the oral margin is a prominent broadly arched carina, a character which does not exactly agree with either genus. The hind femur is larger than those of the outer legs, but otherwise agrees with

Myiolepta; the anterior cross-vein is plainly before the middle of the discal cell while the petiole of the first basal cell is long agreeing with *Syritta* and with *Myiolepta haemorrhoidalis* Philippi from Chile.

***Myiolepta varipes* Loew.** Dark colored species with the sides of the first two abdominal segments more or less yellow. Length 6-8 millimeters.

Male: Vertical triangle, a spot above the antennæ, cheeks and facial tubercle and oral margin adjacent shining black; face and front otherwise black concealed by white pollen, antenna pale brown, third segment nearly round, arista basal and of the same color as its segment. Thorax shining black with sparse white tomentum; wing tinged with yellowish, slightly fumose on anterior part near middle and at apex, first posterior cell closed near the margin, the petiole not half as long as the anterior cross-vein, second vein abruptly curved near the apex and meeting the costa at nearly a right angle; legs variable in color, femora often dark, nearly black, but not always, remainder of legs brown, although not always of the same shade. Abdomen yellow on the sides of the first two or three segments, otherwise black. The extent of the yellow of the abdomen is variable but no segment either dorsally or ventrally, is likely to be uniformly yellow.

Female: This sex appears to be uniformly larger than the male, there is more shining space on the face and front and not so much yellow on the abdomen, although the extent of this color is variable.

Specimens from southern, central and northern Ohio. Previous authors have reported it from Colorado, Washington and Oregon.

***Myiolepta aurinota* Hine.** Male, length 9 millimeters. Antennæ reddish, first two segments slightly darker and more shining than the third, third segment slightly narrower than long, arista colored nearly like the segment that bears it, slightly darkened toward the apex. Region surrounding the ocelli, space above the bases of the antennæ, a triangular spot on the face, including the facial collosity, the oral margin adjacent to the facial spot and the cheeks shining black, remainder of front and face gray pollinose, with sparse white hairs near the eyes. Mesonotum including the scutellum entirely golden tomentose, pluræ with white tomentum; wing nearly hyaline, slightly darkened on anterior part more especially toward the apex; general color of the legs black with white hair, all the tibiæ yellow at bases, first two segments of the middle and hind tarsi yellow, first two segments of each front tarsus dusky, but lighter colored than the three remaining segments, all the femora swollen and with short black spines below on apical parts, abdomen black clothed on the dorsum with black and golden vestiture, on sides with white vestiture; the black vestiture of the dorsum is very short and

distributed as follows: the anterior half of the second segment a rectangular patch on the anterior middle of the third segment occupying two-thirds of the length and over half the width of this segment; and a triangular patch on the anterior third of the fourth segment; the golden vestiture is longer and coarser than the black and most dense on the fourth segment; the first segment and all the sutures between segments are thinly gray pollinose, giving the effect of gray bands.

Description taken from the type male which was taken near Phoenix, Arizona, June 18th, 1902, by J. T. Lloyd.

Myiolepta auricaudata Williston. According to Williston's figure and description this is a dark colored species with short golden tomentum on the thorax and on part of the abdomen, especially the last segment. The two sexes are much alike, but the tomentum of the female mesonotum is not so yellow. Length 6-7 millimeters. Not having much material of the species I reproduce Williston's description.

"Male allied to *M. strigilata* Loew. Body clothed with sparse white or yellow tomentum, this being longer, dense and brassy on the terminal abdominal segments. Vertical triangle long, opaque white in front; contiguity of the eyes short. Face and front clothed with dense white pollen and some golden tomentum on the frontal triangle; a broad shining, bare spot above the base of the antennæ; a transverse band on the face, extending down on tubercle, and the cheeks also, bare and shining black. Tomentum of the mesonotum golden-yellow, arranged in indistinct rows. Second abdominal segment and the anterior part of the third with the tomentum more sparse, apparently bare in certain lights; on the posterior part of the third segment and on the fourth the tomentum is longer, dense, bright brassy-yellow, concealing the ground-color. Legs black; the base of the middle and hind tibiæ, the middle metatarsi, and the hind metatarsi in part, light yellow or white; femora thickened and with spinules below. Wings subhyaline, clouded with brownish distally."

"Female: Front black, with sparse white tomentum and two small, oval, white pollinose spots on each side; face shining black, with an infra-antennal band and a narrow stripe from the eye to the oral margin white-pollinose. Tomentum of the mesonotum more white than in the male."

A female, apparently of this species, before me was taken in the Hauchuca mountains, Arizona. Williston studied two specimens from the state of Guerrero and Morelos, Mexico.

This species is generally darker than *strigilata* and according to Williston, the antennæ are darker and the facial spots are lacking.